ABSTRACT

A tomographic system and method are provided which enable iterative processing of 2D image data for reconstructing 3D image data therefrom. In certain embodiments, a conjugate gradient algorithm is utilized to iteratively process captured 2D image data (e.g., pixels) for reconstructing 3D image data (e.g., voxels) therefrom. In one embodiment, a system for processing 2D image data for reconstructing 3D image data therefrom is provided. The system comprises an imaging system operable to capture a plurality of 2D images at different angles of view. The system further comprises a reconstruction processor communicatively coupled to the imaging system. The reconstruction processor is operable to receive the plurality of captured 2D images and iteratively process the received 2D images to reconstruct 3D image data therefrom in accordance with a conjugate gradient algorithm.